WO 2005/010061 PCT/JP2004/010869

CLAIMS

1. A compound represented by a formula [1]:

$$R^{1}$$
 $C = C$ R^{3} [1]

wherein R^1 and R^2 respectively represent a light or heavy hydrogen atom, R^3 represents a light or heavy hydrogen atom or a methyl group in which tree hydrogen atoms are respectively light or heavy hydrogen atoms, and R^4 is a norbornyl group provided that four or more hydrogen atoms in the norbornyl group are heavy hydrogen atoms.

- 2. The compound of claim 1, wherein five or more hydrogen atoms in the norbornyl group represented by ${\bf R}^4$ are heavy hydrogen atoms.
- 3. The compound of claim 1, wherein six or more hydrogen atoms in the norbornyl group represented by ${\bf R}^4$ are heavy hydrogen atoms.
- 4. A process for producing a compound represented by a formula [1]:

$$R^{1}$$
 C=C R^{3} [1]

wherein R¹ and R² respectively represent a light or heavy

WO 2005/010061 PCT/JP2004/010869

hydrogen atom, R^3 represents a light or heavy hydrogen atom or a methyl group in which tree hydrogen atoms are respectively light or heavy hydrogen atoms, and R^4 is a norbornyl group provided that four or more hydrogen atoms in the norbornyl group are heavy hydrogen atoms,

comprising reacting a norborneol containing four or more heavy hydrogen atoms in its norbornyl group with a compound represented by a formula [2]:

$$\begin{array}{c}
R^{1} \\
C = C \\
C - X \\
O
\end{array}$$
[2]

wherein R¹ and R² respectively represent a light or heavy hydrogen atom, R³ represents a light or heavy hydrogen atom or a methyl group in which tree hydrogen atoms are respectively light or heavy hydrogen atoms, and X represents a halogen atom, a hydroxyl group or an alkoxy group.

- 5. A polymer produced by polymerization of a composition comprising the compound any one of claims 1 to 3.
- 6. The polymer of claim 5, wherein 50 % or more hydrogen atoms are heavy hydrogen atoms.
- 7. An optical member comprising a region formed of a polymer of claim 5 or 6.
- 8. The optical member of claim 7, which gives an absorbance at 910 nm being 70 % or smaller percentage of that given by a

WO 2005/010061 PCT/JP2004/010869

polymer having a same structure except that all hydrogen atoms are light hydrogen atoms.